

## **SURETECH MV Phase Sensor**

The SURETECH MV/PS (Medium Voltage Phase Sensor) is a portable hand-held instrument that measures phase angle, phase rotation direction, and voltage on MV electrical systems. Before coupling MV boards or cables, after work has been performed on the equipment, it is necessary to measure phase, phase rotation and or voltage. This ensures that electrical equipment has been properly installed and connected. MV/PS is a hand-held, battery powered instrument that connects directly to the capacitive screens within MV bushings. The capacitively coupled voltage is:

- fed through jack plugs into SensorA and SensorB
- signal processed to reconstruct the true waveshapes (to filter harmonics etc)
- fed by cables to the hand-held controller
- signals are sampled and various parameters measured by microcomputer
- these parameters are compared with the other phase and output to LEDs and LCD display

### **MV/PS Features:**

Two sensors are provided with 6mm jack plugs, to connect to capacitive shields of 11kV bushings. The voltage and phase on each bushing is then sensed, measured and fed by cable to the hand-held controller. The hand-held controller is managed by a microcomputer to compute and indicate phase and voltage information.

- Two measured voltages on Channel A and B
- Two sensor leads of 3m each are provided to reach across 6m
- Optional extras can also be ordered for data logging etc., or for fixed / permanent applications

### **LED Interface:**

Basic outputs are four LEDs; two LEDs show voltage, and the other two show phase information. The voltage and phase LEDs indicate that the required voltage and phase windows (user specified) have been met on each channel (phase)

- [Voltage / A] LED indicates correct voltage range on SensorA, when ON
- [Voltage / B] LED indicates correct voltage range on SensorB, when ON
- [Phase LED] indicates SensorB is between  $-30$ degrees to  $+30$ degrees from SensorA, when ON

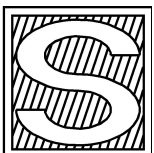
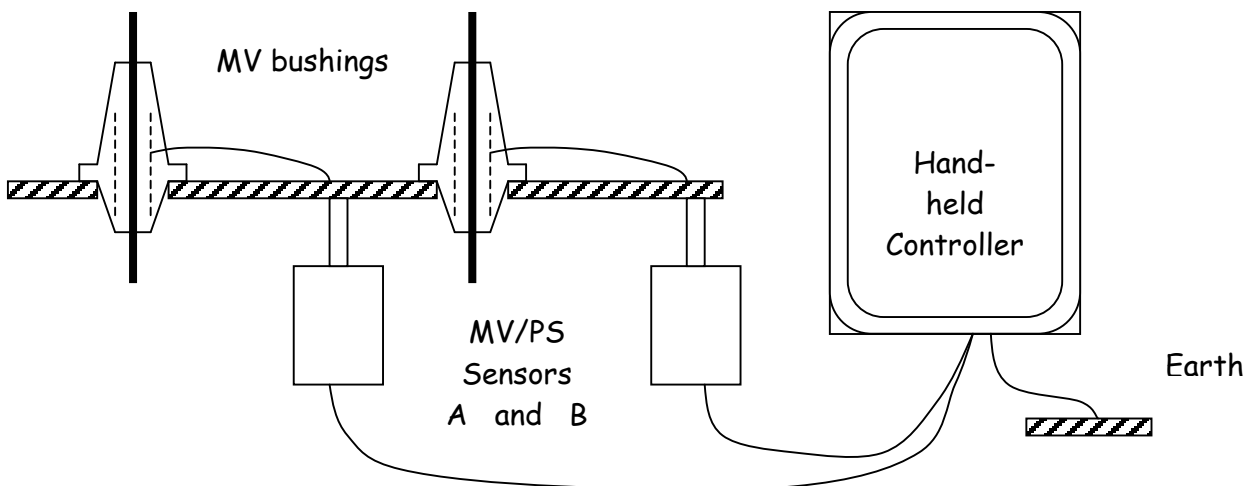
### **LCD Interface:**

Outputs for this instrument include an LCD display to indicate:

- Measured value of voltage (accurate to better than 1%, calibratable)
- High and low threshold voltage range settings can be programmed
- Measured value of phase angle (accurate to better than one degree)
- High and low threshold phase range settings can be programmed
- Measured value of frequency (accurate to 0.01%)
- LCD alphanumeric display with simple push button scroll down menu control interface

## General Features:

- ✓ Voltage input can be taken directly from 11kV bushing-shields
- ✓ Optional RS-232 output feeds directly into a computer (optional extra)
- ✓ Higher and lower voltages (than 11kV) sensors are also available
- ✓ Instrument can work with existing capacitive bushings; please check with factory for capacitance values of bushings
- ✓ Backup to provide support for design, application, installation, and maintenance information



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